

irritability, which the exposure and the operation had induced, with directions to repeat the dose should the pain or want of rest, at night, require an anodyne.

From this time there was a moderate discharge for two or three days, when it ceased. The appetite directly returned, and the patient was soon well. Since the operation, the menses have appeared with great regularity, and Miss G. has enjoyed uninterrupted health up to the present time.

MENDON, MASS., *March 9, 1845.*

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ART. X.—*On several important points in the Anatomy of the Human Larynx.* By JOSEPH LEIDY, M. D. [With two wood-cuts.]

IN the course of a series of investigations of the larynx of mammiferous animals, I was led to the discovery, so far, at least, as regards myself, of several anatomical points in the human larynx, which are not noticed in any of the systematic works on anatomy to which I have had access, and which I have deemed of sufficient importance to present to the scrutiny of anatomists and physiologists, with whom they should claim a greater share of attention than has yet been bestowed upon them, even if the observations be not new.

One of these points is the exact arrangement and relations of the thyro-arytenoideus muscle with the ventricle of the larynx and the thyro-epiglottideus and aryteno-epiglottidei superior and inferior muscles; the other, the extent and relations of the crico-thyroidean membrane.

Upon detaching one ala of the thyroid cartilage from its subjacent connections and throwing it forwards, and removing from beneath the layer of cellular tissue, an irregular layer of muscular fibres will be exposed, extending from the arytenoid cartilage on one side to the entering angle of the thyroid upon the other, and from the superior edge of the cricoid below to the tip of the arytenoid and side of the epiglottis above. Parts of this muscular layer constitute the thyro-arytenoideus, thyro-epiglottideus, and aryteno-epiglottidei superior and inferior muscles.

The thyro-arytenoideus muscle is generally stated as having its origin from the entering angle of the thyroid cartilage, and its insertion into the anterior part of the base of the arytenoid cartilage. But besides this, it will be found the superior portion of the muscle diverges upwards and backwards from its origin, in such a manner as to cover the inferior part of the ventricle of the larynx, and that the most anterior part of this divergent portion is inserted into the side of the epiglottis, constituting what is generally considered as a distinct muscle, under the name of the thyro-epiglottideus.

Passing from the tip, side, and base of the arytenoid cartilage to the side of the epiglottis, is a thin plane of muscular fibres, the superior and inferior edges of which are strengthened by an accumulation of fibres, forming the superior and inferior aryteno-epiglottidei muscles. The inferior edge, which was described a few years since by Mr. Hilton, of London, as a distinct muscle, is stronger than the superior, and is particularly important from its course over the upper part of the ventricle of the larynx. In the preparation, from which the drawing accompanying this paper was taken, this edge is more oblique than usual, and is reinforced by a strong

muscular fasciculus from the thyro-arytenoideus muscle, a condition of things which I have met with several times.

It merely needs reference to the fact, that in the contraction of the muscular layer just described, as a whole, or in part, it must exercise a greater or lesser degree of compression upon the ventricle of the larynx.

Proceeding with the dissection,—if the muscular layer be raised up, the crico-thyroid membrane will be exposed. This will be found to have its origin from the inner circumference of the superior edge of the cricoid cartilage anterior to the arytenoid cartilages, and from the anterior part of the bases of the arytenoid cartilages, and to have its insertion into the inferior half of the entering angle of the thyroid cartilage. Its internal face is in contact with the lining or mucous membrane of the larynx, a good view of it being obtained by dissecting off the latter. Its anterior inferior part is thickened and pierced by several foramina for the transmission of blood-vessels; its superior edge is a little thickened, also, and is on a line with the inferior edge of the opening of the ventricle of the larynx, constituting what is generally described as a distinct structure, under the name of the inferior thyro-arytenoid ligaments or *cordæ vocales*, but which, as such, really do not exist. More properly this membrane cannot be considered to stop here, as it may be traced, though in a very thinned condition, over the whole of the periphery of the ventricle of the larynx, even so far as the pedicle of the epiglottis.

The crico-thyroid membrane throughout its whole extent is composed of the yellow elastic tissue similar to the middle coat of the arteries, and presents, under the microscope, a good example of this substance, by the aid of which instrument, in fact, I detected the existence of the membrane on the periphery of the ventricles of the larynx.

Not being partial to any peculiar theory in regard to the production of the voice, I present merely the ungarnished facts as existing in my dissections.

Fig. 1.

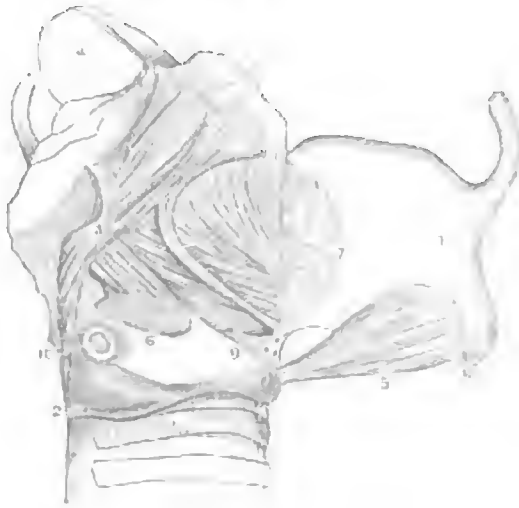


Fig. 1. 1. The right ala of the thyroid cartilage detached from its connections and thrown forwards; 2, the cricoid cartilage; 3, the right arytenoid cartilage; 4, epi-

glottis; 5, crico-thyroideus muscle; 6, crico-arytenoideus lateralis; 7, thyro-arytenoideus; 8, aryteno-epiglottidei; 9, inferior part of the crico-thyroid membrane; 10, 10, capsular articulation of the inferior cornu of the thyroid cartilage with the cricoid.

Fig. 2.

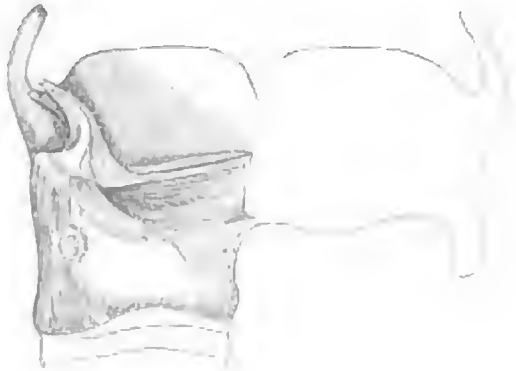


Fig. 2. Represents a lateral view of the crico-thyroid membrane.

Since writing the foregoing, I have seen the fifth volume of the *Encyclopédie Anatomique*, 1845, lately received in this country, in which I notice, on page 224, the following observation: V. Fibres élastiques. Un faisceau de fibres élastiques rayonnantes part de l'angle du cartilage thyroïde, entre les cordes vocales; ces parties antérieure et aux parties latérales du bord supérieur du cartilage cricoïde, sautent ensuite sur l'articulation crico-aryténoïdienne, et s'insèrent à l'angle antérieur et au bord du cartilage aryténoïde. Elles entourent aussi les ventricules, pour monter vers les ligaments thyro-aryténoïdiens supérieurs, et trouvent des faisceaux de renforcement dans le ligament thyro-cricôïdien moyen et les cordes vocales. LAUTH, *Remarques sur la Structure du Larynx et de la Trachée Artère.* (Mem. de l'Acad. Roy. de Méd., Paris, 1835, t. iv. p. 95.)

ART. XI.—*Case of Congenital Inability to raise the Upper Eyelid cured by operation.* By CHAS. A. HALL, M. D., of Burlington, Vermont.

JOHN S. LANDING, of South Island, Lake Champlain, consulted me, Feb. 1st, 1846, with reference to his son, a lad five years old, who had been troubled from his birth with an inability to raise the upper lid of the right eye sufficiently to admit rays of light through the pupil. This was productive of considerable deformity, aside from the habit which he had contracted of carrying the head backward and to one side, to enable him to see with that eye. After consulting with my father, Charles Hall, M. D., I informed him that the best chance of cure would result from an operation which I described to him. As the operation appeared quite simple, and would be attended with little or no danger to the eye, he readily consented to have it performed. Accordingly, Feb. 7th, he brought the boy to our